

# Montana and the Sky

Vol. 41, No. 11

MONTANA AERONAUTICS DIVISION

November/December 1990

## 1991 AIRCRAFT REGISTRATION

By: Fred Hasskamp, Chief  
Safety and Education Bureau

All Montana aircraft owners should have received a bill for their 1991 annual aircraft registration during the first part of December.

Montana Law, Section 67-3-201, MCA requires that: "A Montana resident who owns or purchases an aircraft (including ultralights) and who customarily keeps that aircraft in the state must register it with the Montana Aeronautics Division within 30 days of acquisition and renew the registration by March 1 each year. Aircraft brought into the state to engage in commercial operations must be registered prior to commencing such operations."

A second billing will be sent out during the first part of February to those aircraft owners of record who have not registered their aircraft. In all cases we must account for each and every aircraft listed as being Montana owned or based in Montana.

It is important to note that unflyable, uncompleted homebuilts, damaged or even destroyed aircraft (you may own only the paperwork for that aircraft) must be accounted for each year. Upon carefully reading the bill you receive you will note that there is no fee charged for an "unflyable" aircraft, dealer inventory aircraft or if your aircraft was sold. You must indicate the status of each aircraft and certify that the described aircraft information, as corrected by yourself where necessary, is true and correct.

Each bill must then be sent to the Montana Aeronautics Division for processing. This procedure applies to all aircraft listed as being owned by you.

A green 1991 Aircraft Registration decal will be issued for each flyable aircraft. It is important that the decal be affixed to the aircraft (left-aft) as directed on the back of the decal.

As mentioned earlier all aircraft must be accounted for and properly registered each year. Last year we had problems (not pleasant to have to deal with) with approximately 40 aircraft owners which, for the most part, involved aircraft which were not properly registered with the FAA.

It is VERY IMPORTANT to properly register or if sold, DE-REGISTER that aircraft with the FAA Aircraft Registry (no one would consider leaving an automobile in your name even though sold to someone else for obvious reasons-liability). When you sell an aircraft always sign your registration certificate and indicate to whom the aircraft was sold and mail to the FAA Aircraft Registry before turning the aircraft over to its new owner.

For the new owner; the FAA requires that before flying the newly acquired aircraft, an Aircraft Registration Application form, evidence of ownership (bill of sale) and a recording fee are to be submitted (mailed). The pink copy of the aircraft registration application is to be displayed in the aircraft until the permanent registration certificate is received.

If you have any questions concerning aircraft registration, either state or federal we will be happy to answer them for you.

## PAN AM UPDATE

By: Redge Meierhenry  
Aviation Representative

Montana Aeronautics single Pan Am WeatherMation unit here in Helena has been experiencing severe data storage problems that began November 30th. Getting at the root of these errors has been very time consuming, but the result has been the uncovering of two unrelated events that makes the solution difficult.

The first problem seems to be related to power surges that occur between the breaker box and the WeatherMation unit. The second, and more insidious problem is that of a slight shift in the alignment of the satellite dish which results in numerous bugs. I imagine that the recent wind storms here in Helena created a slight permanent movement in the receiving dish, causing errors in reading the continuous incoming data stream.

We apologize for the inconvenience this may have caused the users, but we believe once solved, the unit should be up and running without these "gremlins" reoccurring.

## LORAN-C MID-CONTINENT GAP ABOUT TO CLOSE

Four new stations along with four existing LORAN stations will form two new chains. The south-central chain is scheduled to go on line by December 31, 1990. The north-central chain is scheduled to go on by April 30, 1991.

# Administrator's Column

**How Safe is Flying?** Well, according to a recent MIT study flying is very safe, about 20 to 30 times safer than traveling in an automobile. The airline travel fatality risk is now lower than that of Amtrak. The report goes on to say that passengers may have preconceived perceptions that certain makes of aircraft and older and smaller aircraft are less safe than others. However, this theory is statistically unsupported. Fatal crashes are so uncommon that conclusive safety rankings based upon aircraft classifications will probably not be statistically analyzed.

\* \* \* \* \*

**Pilot Information Centers Draw FAA Interest.** Shortly before my October 1st term as President of the National Association of State Aviation Officials (NASAO) expired, I signed a contract with the FAA for the NASAO Center for Aviation Research and Education (NASAO/CARE) to collect information from those state aviation agencies now having Pilot Information Centers in order to assist the FAA in determining the feasibility of developing such programs on a nationwide basis. The Pilot Information Centers are the satellite weather dissemination stations such as the Pan Am systems which many state aeronautic agencies now have and are accessed by home personal computers or directly at the station. This user-friendly system was developed by the states and has gained widespread popularity among pilots and others requiring access to weather. In addition to providing real-time weather data (including radar,) the PIC's are capable of providing other information, such as; updated FAA regulations, Notices to Airmen, Advisory Circulars, Terminal Control Area and other airspace depictions, Airman's Information Manual information, Aircraft Airworthiness Alerts, airport information, and safety seminar information.

\* \* \* \* \*

**Thanks to Air Search Volunteers.** I would like to take this opportunity to thank all of the volunteers who helped with the recent air search effort in western Montana. Although the missing aircraft we were searching for was not found the untiring effort put forth by the many volunteers who donated many hours of their time and airplanes certainly was recognized and very much appreciated. We will continue to check out any leads and will again resume more air search when the snow melts.

\* \* \* \* \*

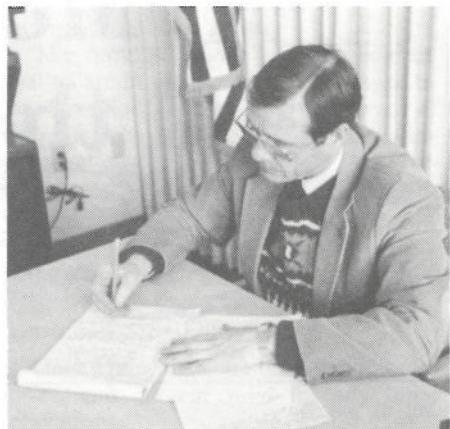
**Best Wishes to Al Williams.** We were surprised and very concerned when we learned that Al Williams had to have heart by-pass surgery. Al has been one of our better mountain air search volunteer pilots for many years and had just spent many hours of very intense flying in the mountains west of Missoula searching for the above-mentioned missing aircraft. Al is getting along fine and we all wish him a speedy recovery.

\* \* \* \* \*

**Opposition to Billings TCA.** Strong opposition to the FAA's December 30 implementation of a MODE C requirement for the Billings airport has been expressed by user groups and individuals. The Montana Congressional Delegation has been deluged with requests to intervene and stop the FAA from implementing a "one of a kind" special use airspace at Billings. Billings was "earmarked" for the MODE C (altitude reporting transponder) requirement based upon a different criteria than any other airport in the FAA's jurisdiction. This criteria was based upon passenger boardings of 200,000 NOT air traffic. The rule initially also hit Fargo, North Dakota but their passenger boardings fell below 200,000, and therefore the FAA withdrew their requirement so Billings is now the only Terminal Radar Service Area (TRSA) designated airport in the United States requiring Mode C. During a recent meeting in Senator Burn's office in Washington D.C., FAA Administrator Busey explained that no voice communication or permission will be required to transit the Billings area if you are flying between the 10 to 5 mile radius' above 1,200 feet AGL or above 4,000 feet AGL within the 5 mile radius if you have Mode C Equipment. If you do not have Mode C equipment you still do not need voice communication or permission if you stay below 1,200 feet outside a 5 mile radius. CONFUSED? Well, so is everybody else, remember I said there is not another TRSA airport in the entire United States with these specially designed requirements. Let's try again.

1. You cannot fly within 5 miles or under 10,000 feet MSL or land at Billings without an altitude reporting transponder. If your airplane does not have an electrical system you will be allowed to land at Billings if you receive prior permission from ATC.
2. You cannot fly within a 10 mile radius of Billings at altitudes above 1,200 feet AGL without an altitude reporting transponder.
3. You cannot fly under 4,000 AGL within a 5 mile radius without Mode C equipment, communications, and approval from ATC.

FAA Administrator Busey stated that in view of the uniqueness of the Billings "one and only rule" and the steady declining airline passenger boardings at Billings he would consider issuing another NPRM if he received an immediate petition for same. A petition from Aircraft Owners and Pilots Association, Experimental Aircraft Association, Montana Pilots Association, Montana Flying Farmers, Montana Antique Aircraft Association, the Montana Chapter of the International 99s and the Montana Aeronautics Board was filed on December 14, 1990.



In conclusion, just in case the Billings Mode C requirement is not postponed or rescinded, and in view of the obvious confusion over a one and only TRSA with a Mode C requirement, I would strongly recommend that you carry a few NASA Aviation Safety Reporting forms (NASA ARC 277) just in case you need to file for immunity for an unintentional incursion into the Billings TCA.

Montana and the Sky  
USPS 359 860

DEPARTMENT OF COMMERCE  
Stan Stephens, Governor  
Chuck Brooke, Director

Official Monthly Publication  
of the  
AERONAUTICS DIVISION  
Phone 444-2506  
2630 Airport Road  
Helena, Montana 59604  
Michael D. Ferguson  
Administrator

AERONAUTICS BOARD  
C.R. Ugrin, Chairman  
Albert C. Cochrane, Member  
Joel Fenger, Member  
Douglas Freeman, Member  
Howard Gipe, Member  
Russell R. Pankey, Member  
Phillip O. Pederson, Member  
Myron K. Strand, Member  
George Teslovick, Member

MONTANA AND THE SKY is published monthly  
in the interest of  
aviation in the State of Montana.

Second-Class postage paid at  
Helena, Montana 59604  
Subscription \$3.00 per year  
Editor: Debbie Alke

"POSTMASTER: Send address change to Montana and the Sky,  
Box 5178, Helena, Montana  
59604."

## DEADLINE NEARS FOR VAN DE RIET FLIGHT SCHOLARSHIP

January 31, 1991 is the deadline for applications for the \$200 Van De Riet Flight Scholarship. The scholarship will be presented during the 1991 Montana Aviation Conference in Kalispell on March 2, 1991.

The scholarship was established as a memorial to Jack Van De Riet by his wife Ruth. It is to be used to help defray costs of flight instruction.

Award of the scholarship will be based on applications in the form of a letter explaining the reasons for applying and outlining outstanding achievement, future career goals, and past aviation experience.

Letters of application should be sent to Montana Aeronautics Division, Box 5178, Helena, MT 59604 or call Fred Hasskamp at the Division at 444-2506 for more information.

## PILOT REGISTRATION FEE INCREASE

In a response to a recommendation from the Montana Department of Commerce to increase the pilot registration fee to the maximum allowed by law, the Aeronautics Board solicited input from the Aviation Organizations of Montana (AOM). The AOM approved the \$10 fee and recommended that the increase not be tied to any specific project. The AOM felt this was a small way to show administration that those in the industry were willing to do their share in helping to increase Division funding.

Following the AOM's support of the increase, the Montana Aeronautics Board approved the increase to \$10. The Board recommended that a subscription to the newsletter, MONTANA AND THE SKY, be included in the \$10 pilot registration fee. The newsletter subscription has previously cost \$3 and will continue at this rate for non-registered pilots.

## FAA PROGRAMS

By Gerald C. Burrows, Chief  
Airport/Airways Bureau

En Route Air Navigation Systems are being planned for Sand Springs and Glendive. Preliminary visits have been made for VOR/DME site selection. Final recommendations are being drafted. Construction is not scheduled until the summer of 1991 and will continue into the summer of 1992.

## BILLINGS DEC. 30TH MODE C REQUIREMENT

By: James A. Erkens, Area Supervisor  
Billings ACTC

Effective December 30, 1990, Mode C transponder will be required when operating within ten nautical miles of the Billings airport at 10,000 feet MSL and below with the exception of that airspace below 1200 feet ABL outside the Airport Traffic Area (ATA).

The 1200 feet AGL is determined by the actual terrain the aircraft is over, not the average terrain or the elevation of the primary airport that provides air traffic control services. These same general requirements become effective in Airport Radar Service Areas (ARSA) on that date. The FAR 91.215 allows for ATC to give immediate authorization to operate in that airspace for an aircraft with an inoperative transponder or inoperative Mode C equipment. This rule requires that a request to operate an aircraft without an installed transponder be made to the facility having jurisdiction over the airspace at least one hour before the proposed operation. It is our intent at Billings to adhere to the requirement of this regulation but provide as much flexibility as possible so as to not unduly inconvenience our users, yet provide for an orderly traffic flow eliminating or reducing unknown traffic in the terminal area. Aircraft that were not originally certified with an engine driven electrical system or which have not subsequently been certified with such a system installed are exempt from this regulation, along with balloon and gliders.

Airport Oscars and the Laurel airport with their associated traffic patterns are outside the Billings ATA. Staying within 1200 feet of the surface in these areas avoids the effected airspace at Billings. Flights north of these airports may place aircraft in the Mode C required airspace.

Much of the credit for the success of the Billings Terminal Radar Service Area (TRSA) can be attributed to the cooperation and participation of you, our users. We sincerely appreciate your cooperative efforts in our air traffic system and want you to feel free to visit any air traffic facility and observe our dedicated controllers at work. Should you have further questions about this new Mode C rule for Billings or any of our procedures, please phone (406) 248-8384 during normal office hours.

## CALENDAR

Feb. 15 - 17—Flight Instructor Refresher Clinic, Helena.

Feb. 27 - March 2—1991 Montana Aviation Conference, Outlaw Inn, Kalispell.

Feb. 28 - March 2—Aircraft Mechanics Refresher Seminar, Outlaw Inn, Kalispell.

March 4 - 6—Upper Midwest Aviation Symposium, Radisson Inn, Bismarck, North Dakota.

May 15—LORAN-C Users' Forum, Airport Hilton Hotel, El Paso, Texas.

May 17 - 18—Big Sky Wing, OX5 Aviation Pioneers, Stardust Motor Lodge, Idaho Falls, Idaho.

June 17 - 28—Aerospace Teacher Workshops.

Sept. 20 - 22—Mountain Search Pilot Clinic, Kalispell.

## VETERANS ADMINISTRATION FLIGHT TRAINING

Montana Aeronautics Division was recently reappointed State Approving Agency for Flight Schools by the VA. The new "GI Bill" reinstated flight training for a 4-year period beginning on September 30, 1990, for eligible persons. The new flight training program is open only to certain Veterans (those enlisted after July 1, 1985), Reservists with a 6-year commitment and National Guard Active Service Personnel.

Questions concerning Veteran eligibility should be directed to the VA at Fort Harrison prior to beginning flight training. Under the new VA Flight Training Bill the VA will pay 60% of dual flight instruction only.

FAR Part 141 Flight Schools may be approved for the training of veterans. Contact Fred Hasskamp at Aeronautics for flight school approval information.

## MONTANA SEARCH PILOT CLINIC HELD SEPTEMBER 21-23 IN KALISPELL



Participants in ELT Homing Class receive hands-on training.



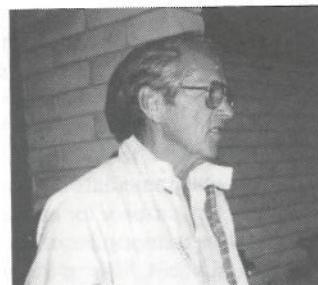
Enjoying a break from the action and a bite to eat.



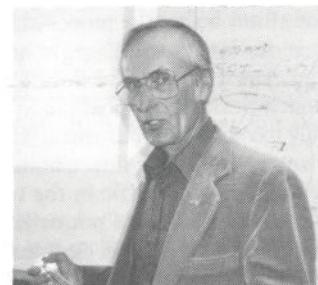
Mike Ferguson, Administrator, Montana Aeronautics Division, welcomes participants to the Montana Search Pilot Clinic.



Skip Stoffel, Emergency Response Institute, Cashmere, Washington, teaches survival training.



Mike Strand, Flight Instructor, gives words of advice.



ELT Homer Training is conducted in part by Will Mavis.



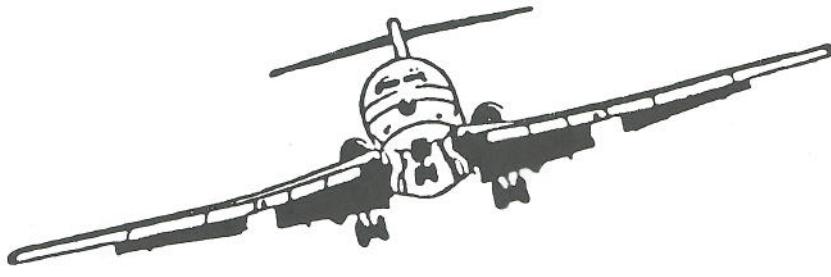
ELT Homer Trainers receive classroom instruction.



Fred George, Flying Magazine works on his aircraft as Blaine Meissner, Aircraft Technician, Montana Aeronautics Division stands by.



Hugh Wilkins, ELT Homing Instructor, demonstrates the use of an AM/FM radio during training.



# **COMING AT YOU... 1991 MONTANA AVIATION CONFERENCE**

**February 27th thru March 2nd, 1991  
The Outlaw Inn  
KALISPELL, MONTANA**

## **INFORMATIVE**

- \* Aviation Organizations Meetings
- \* Briefings
- \* Seminars
- \* Exhibitors

## **ENTERTAINING**

- \* Banquets & Socials
- \* Special Performance by the Montana Logging & Ballet Company
- \* Ski The Big Mountain - Day or Night
- \* Enjoy the Best the Fabulous Flathead Valley Has to Offer

**Keynote Speaker RALPH HOOD,  
The Flying Humorist**

**Make Plans to Attend Now -  
This Statewide Aviation Conference Promises to Be the Best Yet**

## WINTER FLYING

By: Fred Hasskamp, Chief  
Safety and Education Bureau

Winter is a good time to go flying - smooth air, good performance (low density altitudes). Before you fly in winter conditions there are a few extras needed both for yourself and your aircraft which will help give you a safe and enjoyable flight.

### Aircraft preparation:

- protect aircraft from ice and snow - hangar or wing/engine covers
- review owners manual for information on winter operations
- winterization kits for engine, winter oil, good battery
- heater inspections, check operation and inspect for carbon monoxide leaks
- remove wheel bearings to help prevent wheels and brakes from freezing up
- survival gear in the aircraft, wear appropriate clothing to survive in the country you are flying over
- check aircraft carefully paying special attention to engine preheat, controls/freedom of full movement, remove all ice, snow or frost from aircraft

A review of old accident reports highlight a need for complete weather briefings which include runway conditions at destination airport. There are many cases on record which involve aircraft collisions with snow banks on airports. Reasons range from loss of control in gusty winds and icy runways to inability to see snow banks, snow birms, etc. due to poor lighting conditions.

Short days during the winter can mean more night flying which requires that the pilot has made three full stop take-offs and landings at night prior to carrying passengers.

## AIRPORT MANAGERS REMINDER

By: Redge Meierhenry  
Aviation Representative

As winter moves upon us, it becomes incumbent on airport managers to keep a close watch on the changing conditions at their airport. Often times managers develop a mind set that revolves around summer flying weather, so that when winter comes, it catches some by surprise.

Now is the time to be thinking about winter conditions, operations and maintenance at your airport. The following is an exclusive list of items and questions

meant to start your mental gears turning as they might apply to your particular situation.

1. Since it is getting dark earlier and nighttime is lasting longer, your system of airport lighting becomes ever important during the winter months. Are your runway/taxiway lights operational and secure to withstand snow plowing operations? Have you maintained your beacon so that it remains reliable during the cold. From personal experience, I can say it's a bad time indeed to be up on a beacon tower with a wind chill of -20 deg. F.

2. Have you planned your snow plowing operations to minimize snow berms that can accumulate along runway edges? And now about that snow plow machine. Since you probably haven't started it since last winter, is it in good working order?

If you don't plow your airport, make sure you are on top of getting NOTAM's out to your Flight Service Station. The specialist there can help with phraseology as it relates to your reportable conditions.

Perhaps now would be a good time to review Advisory Circular 150/5200-28, Notices to Airmen for Airport Operators. The A/C gives helpful guidance on when and how to issue NOTAM's and reviews conditions relating to special reporting considerations that relate to winter airport operations. Please call our office if you need a copy of this A/C.

3. Are tiedown areas marked in such a way that pilots can find their way if taxiway markings are obscured by snow?

4. If you have a telephone on the airport, is it working? This seems like a small item but can become very important to the pilot when its cold and dark.

5. Is your security lighting in good shape?

6. If there are fueling operations on your airport, is the hose and grounding wire in good order. If you have the capability, sumping your fuel tanks for water is a good idea since the spread between dew point and ambient air temperatures in the storage tank lessens considerably.

There certainly are more items than what is listed here that deserve the managers attention for winter operations. To sum up what those areas might be for your airport, consider that general maintenance and airport upkeep is much easier accomplished now than when temperatures drop to below freezing. Your gloved hands will thank you for planning ahead.

## HELENA GETS ATIS ON 120.4

Automatic Terminal Information Service will be commissioned approximately February 1, 1991. Frequency will be 120.4 MHz.

ATIS is the continuous broadcast of recorded noncontrol information. Its purpose is to improve controller effectiveness and to relieve frequency congestion by automating the repetitive transmission of essential but routine information.

Pilots are urged to cooperate in the ATIS program as it relieves frequency congestion on approach control, ground control and local control frequencies.

## TIPS TO ENHANCE YOUR CHANCES OF DETECTING OTHER AIRCRAFT

By: Mountain Flyer

The following safety tips do not come with any "iron clad" guarantee. However, if they are followed, your chances of detecting other aircraft that may be on a collision course with you will be enhanced.

• If the other aircraft appears to be stuck IN THE SAME POSITION ON YOUR WINDSHIELD you are on a collision course. If it moves you are going to miss it, but take some positive avoidance action just to be on the safe side.

• You are looking for a small target which grows rapidly in size only AFTER IT IS TOO LATE TO BE AVOIDED. It can take a couple of seconds for you to appreciate the situation, make a response and change your course, THEREFORE, MINIMIZE THE TIME THAT YOU HAVE YOUR HEAD STUCK IN THE COCKPIT.

• Concentrate your search in those areas of potential conflict, which in most situations will be along the horizon. Look for those aircraft at the same altitude as yourself.

• KEEP YOUR EYES SCANNING THE SEARCH AREAS IN QUICK MOVEMENTS. It is impossible to move your eyes in a smooth, continuous way, UNLESS there is something out there moving in a smooth way which the eye can track.

## FAA ISSUES CERTIFICATES

### PRIVATE

Jeane Batsib-Lesnik .....	Helena
Jeffrey Gerringa .....	Billings
Patricia Jordan .....	Bozeman
Edward King .....	Great Falls
Mark Konop .....	Billings
Kevin Malloy .....	Bozeman
Duane Markuson .....	Galata
Evelyn Roy .....	Missoula
Wiliam Voegle .....	Bozeman

### PRIVATE INSTRUMENT

Rose Marie Buschbom .....	Livingston
Waymoth Fitzgerald .....	Columbus
Lisa Melcher .....	Havre
Matt Parriman .....	Helena
James Ramsey, Jr. .....	Missoula
Steve Reinhart .....	Billings

### PRIVATE MULTIENGINE

Michael Cochran .....	Whitefish
-----------------------	-----------

### COMMERCIAL INSTRUMENT

Jeff Edes .....	Roundup
Mark Frenk .....	Billings
John Kennedy .....	Billings
James Traub .....	Missoula
Brian Wadsworth .....	Big Sky

### COMMERCIAL AIRPLANE

Michael Gibeau .....	Missoula
----------------------	----------

### MULTIENGINE INSTRUMENT

John Maun .....	Missoula
Shawn Roods .....	Billings
William West .....	Helena

### INSTRUCTOR - FLIGHT

John Lynch .....	Billings
John Novak .....	Billings

### INSTRUCTOR - GROUND

Charles Melaney .....	Victor
-----------------------	--------

### INSTRUMENT INSTRUCTOR

Carson Coryell .....	Forsyth
----------------------	---------

### INSTRUCTOR RENEW/REINSTATE

Denny Bridges .....	Helena
Edison Brockhausen .....	Missoula
Patrick Dvarishkis .....	Ballantine
Gary Jorgenson .....	Billings
Stanley Monter .....	Bozeman
Michael Seaman .....	Kalispell
Patrick Smith .....	Eureka
James Thorn .....	Helena

### AIR TRANSPORT PILOT

Gale Nayematsu .....	Billings
----------------------	----------

## 99s AIRMARK ENNIS



Pictured above are (from left) Vickie Gordon, Archie Nunn, Tammy Yadinak, Loretta Chapman and Leroy McGary.

The Montana Chapter of the International 99s finished another airmarking project on September 29, in Ennis. The Aeronautics Division supplies the paint for this ongoing project for the 99s.

## NEW WEATHER OBSERVATION SERVICES IN MONTANA

By: Paul F. Eyssautier  
WSEO/Meteorologist  
U.S. Department of Commerce  
National Oceanic and Atmospheric Administration

The National Weather Service (NWS) is in the midst of modernizing their operations. This is a process that will continue at least through the year 2000. New radar and communication systems will allow the NWS forecasters to receive much more information than they currently have available to arrive at a forecast. Many of the more labor intensive operations will be handled with the aid of advance computers.

Some of the new equipment that is a part of the NWS and/or FAA observing system has already arrived in Montana. Automated Weather Observing Systems (AWOS) have been, or shortly will be, installed at Cut Bank, Glendive, Lewistown, and Sidney. These sites are currently undergoing testing.

Sensors at these sites will measure cloud conditions below 12 thousand feet, visibility, temperature, dew point, wind speed and direction, and altimeter setting. Cloud bases are determined by a sensor that is directed vertically. This sensor takes samples every 30 seconds. The final output is determined from a thirty minute average of this data sample. If cloud bases are higher than 12 thousand feet, or no clouds are detected below 12 thousand feet, then the automatic observation via telephone will report "no clouds below one two thousand".

The visibility sensor takes readings every ten seconds. These readings are averaged every minute. A correction factor is then applied to adjust for day or night visibility. The final observation report is a 10 minute average of the sampled data. The visibility values reported by AWOS will range from 1/4 to 2 miles, in 1/4 mile increments, 2 to 4 miles in 1/2 mile increments, 5, 7, and 10 miles. Visibilities below a quarter of a mile will be reported as less than 1/4 mile.

There are certain limitations to this system. With one sensor, cloud conditions and visibilities are valid for only a small area of the airfield. Therefore, approaching weather systems, such as fog and low clouds, cannot be detected until they are

*continued on back page*

directly over the sensor. Similarly, thunderstorm activity that may be in the vicinity of the airfield won't be reported until the cloud bases of the thunderstorm are over the AWOS sensor.

There is also lag in detecting weather phenomena. The programs used in determining visibilities and cloud bases take averages of sampled data over a ten, and thirty minute interval, respectively. Therefore, once the phenomena has reached the sensor there is some delay before it is reported in the observation.

During specified hours, selected AWOS sites will be augmented by human observers. Depending on the operating mode of the AWOS site, the observer will be able to enter either a complete observation, or simply add additional remarks to the AWOS observation. If a complete observation is not entered, the additional remarks will consist of thunderstorms,

precipitation, and restrictions to visibility entries, when the visibility decreases to 3 miles or less.

These sensors will be operating twenty-four hours per day, baring maintenance outages. The observations will be available through a telephone answering device as well as ground-to-air radio communications systems. This will increase the dissemination and availability of the observations. At this time, Cutbank and Lewistown observations are available daily between 6 am and 10 pm.

Aviation forecast products will continue to be available for these sites. While a human observer is present at the airfield, aviation terminal forecasts (FTs) will be available in its present form. Experience from two AWOS sites in Oregon has shown us limitations remain with the observation system. Therefore, regular terminal forecasts will not be issued when a

human observer is absent.

The AWOS systems that are not installed are in a test mode, and cannot be used in pilot briefings. However, many of you might be interested in listening to the observations from these AWOS sites. Following are the telephone numbers of the sites that are now installed.

Cutbank 873-5418

Sidney 482-7323 - incomplete at this time

Glendive 687-3346

Lewistown 538-5120

Once again, these are only test observations, and are not valid for any flight operations.

2,000 copies of this public document were published at an estimated cost of \$.42 per copy for a total cost of \$837, which includes \$632 for printing and \$205 for distribution.

**MEMBER**

**NATIONAL ASSOCIATION OF STATE AVIATION OFFICIALS**

**PURPOSE**—"To foster aviation, as an industry, as a mode of transportation for persons and property and as an arm of the national defense; to join with the Federal Government and other groups in research, development, and advancement of aviation; to develop uniform laws and regulations; and to otherwise encourage cooperation and mutual aid among the several states."



**November/December 1990**

**P.O. Box 5178  
Helena, Montana 59064**

**Second-Class  
Postage Paid at  
Helena, MT 59604**